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FOURTH BI-MONTHLY PROGRESS REPORT  
 UNIVERSITY OF ALASKA  
 ERTS PROJECT 110-7  
 March 31, 1973

- A. TITLE OF INVESTIGATION: Application of ERTS-1 imagery to the study of caribou movements and winter dispersal in relation to prevailing snowcover.
- B. PRINCIPAL INVESTIGATOR/GSFC ID: Peter C. Lent/U682
- C. PROBLEMS IMPEDING INVESTIGATION: Neither a digital color display unit nor digital tapes ordered from NDPF have yet arrived on campus.

D. PROGRESS REPORT:

1. Accomplishments during the reporting period: Aerial reconnaissance data were obtained on March 27th, 28th, and 29th. Locations of caribou aggregations, intensively cratered feeding areas, and areas which have not received recent caribou utilization were determined. Snow measurements consisting of depths and Ramsonde profile transects were obtained from seven randomly selected sites on the South slope of the Philip Smith mountains. Weather was excellent on the 28th and satellite imagery for that date should prove most useful in our analysis. Conditions deteriorated on the 29th, however, and it is unlikely that imagery obtained on the 29th and 30th will be very useful in terms of our project objectives.

Preliminary analysis of false color composite imagery indicates it should be possible to identify botanical community types on ERTS imagery. However, this type of analysis has inherent problems such as frequent lack of registration of NDPF products and the subjective interpretation of community type necessary in areas where broad ecotones exist. Therefore, we feel that more accurate and consistent analyses will probably be obtained with the tape products and a digital color display unit.

2. Plans for next reporting period: Reconnaissance flights will be made during periods of satellite overflight to determine locations of caribou aggregations, heavily used feeding areas, and the rate of snow melt in these heavily used areas. Some evidence exists that these heavily used wintering areas will melt free of snow considerably sooner than unutilized areas.

E. SIGNIFICANT RESULTS: Preliminary analysis of false color composite imagery has indicated the feasibility of using ERTS imagery to map botanical community types important as caribou range in northeast Alaska.

E73-10401)	APPLICATION OF ERTS-1 IMAGERY	N73-20363
TO THE STUDY OF CARIBOU MOVEMENTS AND		
WINTER DISPERSAL IN RELATION TO		
PREVAILING SNOWCOVER (Alaska Univ.,		Unclas
Fairbanks.)	3 p HC \$3.00	CSCL 06C 63/13 00401

F. PUBLICATIONS: None during the reporting period.

G. RECOMMENDATIONS: None.

H. CHANGES IN STANDING ORDER FORMS: None.

I. ERTS IMAGE DESCRIPTOR FORMS: No new imagery received from NDPF  
during the reporting period.

J. DATA REQUEST FORMS: None

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TITLE OF INVESTIGATION: Application of ERTS-1 imagery to the study  
of caribou movements and winter dispersal  
in relation to prevailing snowcover.

DISCIPLINE: Environment

SUBDISCIPLINE: Phenology / Wildlife Habitat Surveys

SUMMARY OF SIGNIFICANT RESULTS: Preliminary analysis of false color  
composite imagery has indicated the  
feasibility of using ERTS imagery to map botanical community types  
which are important caribou range in northeast Alaska.